

claims. No change in claim scope follows from the amendment. No new matter is introduced by the amendment.

All the pending claims stand rejected. Applicants respectfully request reconsideration of the rejections based on the following comments.

Objections to the Claims

The Examiner objected to claim 10 for an inconsistency in terminology in the claim. Claim 10 has been amended to remove the inconsistency. Applicants respectfully request withdrawal of the objection to claim 10.

Rejections Under 35 U.S.C. §102(b)

The Examiner rejected claims 2-4, 11, 14 and 15 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent 5,808,184 to Boutaghout et al. (the Boutaghout patent). The Examiner asserts that conventional techniques for depositing magnetoresistive materials apply very thin, i.e., planar surfaces. Applicants respectfully request reconsideration based on the following comments.

Applicants note that the Boutaghout patent describes the length of the sensor "L" along the air bearing surface as 0.5 - 3.0 microns. See column 4, lines 13-15. This length of the transducer is at the most on the order of 1/1000th of the length of the glide head itself. **This is consistent with the thin/flat planar structure being oriented along the trailing edge of the head.** This would correspond with conventional processing of heads with transducers.

The Examiner points to Fig. 1 where the edges of the transducers along the air bearing surface are noted. Since it is the edges of the transducers along the air bearing surface that are effect, pointing to the edges is reasonable. However, the structure in Fig. 1 should be interpreted in the context of Fig. 3 where the orientation of the transducers along the trailing edge of the head and not along the air bearing surface is clear.

Why?

In particular, the Examiner noted that the Boutaghou patent indicates that the rail acts as a substrate for the MR sensors. Column 3, lines 56-58. However, this statement supports Applicants' position rather than the Examiner's position. According to Boutaghou, the substrate is element 28. Referring to Fig. 3 of the Boutaghou patent substrate 28 is positioned to the right of the sensors and grooves. **According to column 3, lines 56-58 in view of Fig. 3, the sensors are placed on the trailing edge of the head rather than on the air bearing surface.** Thus, the Boutaghou patent explicitly teaches that the sensors are oriented along the trailing edge rather than the air bearing surface. Since the Boutaghou sensors are oriented along the tailing edge, the Boutaghou patent does not anticipate the present claims.

The Examiner consistently has indicated that it is conventional to place magnetoresistive elements along the air bearing surface of a head. None of the prior art cited by the Examiner supports this position. Applicants respectfully request documentary support for this position if the approach is indeed conventional. Unless such documentary support is presented, Applicants believe that the Examiner has fallen far short of establishing a *prima facie* case of unpatentability.

Since the Boutaghou patent does not disclose magnetoresistive transducers oriented along the air bearing surface of a glide head, the Boutaghou patent does not anticipate any of Applicants' claims. Applicants respectfully request withdrawal of the rejection of claims 2-4, 11, 14 and 15 under 35 U.S.C. §102(b) as being anticipated by the Boutaghou patent.

Rejections Under 35 U.S.C. §103(a) Over Boutaghou Alone

The Examiner rejected claims 5-6, 8-10, 13, 16, 18-19 and 21 under 35 U.S.C. §103(a) as being unpatentable over the Boutaghou patent. The Examiner has noted specific features that are asserted to be taught or suggested by the prior art. Applicants respectfully request reconsideration of the rejections based on the

following comments. Applicants discuss the apparatus claims and the method claims separately for clarity.

1. Claims 5-6, 8-10, 13, and 16

The basis for the Examiner's rejection of the article claims is based on the position that the Boutaghou patent discloses MR sensors oriented along the air bearing surface. However, this position is inconsistent with Fig. 3 and column 3, lines 55-57 of the Boutaghou patent. Since the Boutaghou patent does not teach or suggest transducers oriented along the air bearing surface, the Boutaghou patent does not render the present claims obvious.

Applicants also disagree with all of the positions taken by the Examiner by Official Notice. These are all clearly based on hindsight using the Applicants' specification to reconstruct the claimed invention. Nevertheless, these issues do not need to be examined further due to the fact that the Boutaghou patent does not teach or suggest sensors along the air bearing surface.

2. Claims 16-18

"To imbue one of ordinary skill in the art with knowledge of the invention in suit, when no prior art reference or references of record convey or suggest that knowledge, is to fall victim to the **insidious effect of a hindsight syndrome** wherein that which only the inventor taught is used against its teacher." W. L. Gore & Assocs., Inc. v. Garlock, Inc., 220 USPQ 303, 312-13 (Fed. Cir. 1983). "Skill in the art does not act as a bridge over gaps in the substantive presentation of an obviousness case, but instead supplies the primary guarantee of objectivity in the process." All-Site Corp. v. VSI International Inc., 50 USPQ2d 1161, 1171 (Fed. Cir. 1999) (emphasis added).

The Examiner has relegated the entire method to being obvious without any reference to the teaching of the prior art with respect to the deposition of magnetoresistive transducers. The claimed methods were previously allowed, yet they are now rejected based solely on them being the "optimum" or "preferred" way of

producing the desired glide heads. Thus, between June 14, 2000 and January 19, 2001, without any insight gained from the prior art, the claims have become obvious to the Examiner solely because they are an obvious design choice. This is an extreme case of hindsight based on the Applicants' own disclosure. The U.S. Supreme Court has outlined a process for evaluating obviousness. The Examiner has not looked to any of the Graham factors, or even to the prior art for guidance on establishing the obviousness of the claims.

In the prior art approaches, the glide heads are cut from a wafer with the air bearing surface being oriented along the cut edge. If the Examiner cannot point to anything in the prior art to suggest the claimed methods, there seems to be no basis for establishing a *prima facie* case of obviousness. The prior art does not teach or suggest placement of the sensors oriented along the air bearing surface. Thus, the claims are not obvious.

3. Claims 19, 21

There is no discussion of the rejection of claims 19 and 21. If the rejection of these claims is maintained, Applicants respectfully request a discussion of their rejection so that Applicants can address the rejections.

4. Conclusions

Since the Boutaghout patent does not teach or suggest the claimed glide heads or methods, the Boutaghout patent does not render any of Applicants' claims obvious. Applicants respectfully request withdrawal of the rejection of claims 5-6, 8-10, 13, 16, 18-19 and 21 under 35 U.S.C. §103(a) as being unpatentable over the Boutaghout patent.

Rejection of Claim 7

The Examiner rejected claim 7 under 35 U.S.C. §103(a) as being unpatentable over the Boutaghout patent as applied to claims 2-6, 8-11, 13-16, 18-19 and 21, and further in view of U.S. Patent 5,689,064 to Kennedy et al. (the Kennedy patent). The Examiner cites the Kennedy patent for disclosing a PZT transducer with

electrical leads. Applicants respectfully request reconsideration of the rejections based on the following comments.

Applicants noted in the Appeal Brief of November 13, 2000 that there was no motivation to combine the disclosures of the Boutaghou patent and the Kennedy patent. That discussion is incorporated herein by reference. The Examiner has not refuted any of these arguments. There is no disclosure in the Kennedy patent that provides **any guidance** on the connection of transducers on the air bearing surface with the top surface of the glide head.

Furthermore, the Kennedy patent does not teach or suggest sensors on the air bearing surface. Since neither the Boutaghou patent nor the Kennedy patent disclose sensors oriented along an air bearing surface, the combined disclosures of the Boutaghou patent and the Kennedy patent do not render the claimed invention obvious.

Applicants respectfully request withdrawal of the rejection of claim 7 under 35 U.S.C. §103(a) as being unpatentable over the Boutaghou patent as applied to claims 2-6, 8-11, 13-16, 18-19 and 21, and further in view of the Kennedy patent.

Rejection of Claim 12

The Examiner rejected claim 12 under 35 U.S.C. §103(a) as being unpatentable over the Boutaghou patent as applied to claims 2-6, 8-11, 13-16, 18-19 and 21, and further in view of U.S. Patent 5,423,207 to Flechsig et al. (the Flechsig patent). The Examiner cited the Flechsig patent for disclosing a grounded sensor. Applicants respectfully request reconsideration of the rejection of claim 12 based on the following comments.

The Flechsig patent, like the Boutaghou patent and the Kennedy patent, does not teach or suggest a sensor oriented along the air bearing surface. Since none of the cited references teach or suggest the claimed orientation of the sensor/transducer, the combined disclosures of the cited references do not render claim 12 obvious. Applicants respectfully request withdrawal of the

rejection of claim 12 under 35 U.S.C. §103(a) as being unpatentable over the Boutaghout patent as applied to claims 2-6, 8-11, 13-16, 18-19 and 21, and further in view of the Flechsig patent.

Rejection of Claims 20 and 22

The Examiner rejected claims 20 and 22 under 35 U.S.C. §103(a) as being unpatentable over the Boutaghout patent as applied to claims 2-6, 8-11, 18-19 and 21 in view of U.S. Patent 4,635,139 to Nguyen et al. (the Nguyen patent). The Examiner cites the Nguyen patent for disclosing the application of thin film transducers mounted on the rail of an air bearing surface. Applicants respectfully request reconsideration of the rejections based on the following comments.

Applicants believe that there has been a misunderstanding regarding the Nguyen patent. **The Nguyen patent describes placing the transducer along the trailing edge of the head not oriented along the air bearing surface.** According to the Nguyen patent, the thin film transducer is element 28. In Fig. 3 of the Nguyen patent, it is clear that element 28 is along the trailing edge of the head. The trailing edge of the glide head is "the rear of rail 24." Thus, the Nguyen patent, like the Boutaghout patent, discloses transducers that are not oriented along the air bearing surface. Since neither the Boutaghout patent nor the Nguyen patent disclose a transducer oriented along the air bearing surface, they do not render obvious Applicants' methods for forming glide heads.

Applicants respectfully request withdrawal of the rejection of claims 20 and 22 under 35 U.S.C. §103(a) as being unpatentable over the Boutaghout patent as applied to claims 2-6, 8-11, 18-19 and 21 in view of the Nguyen patent.

CONCLUSIONS

In view of the above amendments and remarks, Applicant submits that this application is in condition for allowance, and such action is respectfully requested. The Examiner is invited to

telephone the undersigned attorney to discuss any questions or comments that the Examiner may have.

The Director of the Patent and Trademark Office is authorized to charge any fee deficiency required by this paper or credit any overpayment to Deposit Account No. 23-1123.

Respectfully submitted,

WESTMAN, CHAMPLIN & KELLY, P.A.

By: Peter S. Dardi
Peter S. Dardi, Ph.D., Reg. No. 39,650
Suite 1600 - International Centre
900 Second Avenue South
Minneapolis, Minnesota 55402-3319
Phone: (612) 334-3222 Fax: (612) 334-3312

PSD:nhw



-9-

MARKED-UP CLAIM AMENDMENTS

RECEIVED
APR 17 2001
TECHNOLOGY CENTER 2800

Claim 10 has been amended as follows:

10. (Amended) The glide head of claim 2 wherein the thermal transducer extends substantially from the front edge of the glide head [slider] to the rear edge of the glide head.